USER MANUAL

making everyday smoother

airsuspension

• Increased comfort • Better driveability • More safety

VB-SEMIAIR

COMMERCIAL VEHICLE - MOTORHOME

INFORMATION - MANUAL - SERVICE

Better safety and comfort on the road

It's all under control with VB-Airsuspension systems

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Would you prefer to read this manual in another language?
To see all available languages, visit www.vbairsuspension.com (click on ‘downloads’).

Basic information

Vehicle information

Make and model: _____

Chassis number: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Kilometre reading at time of installation: _____ km

Kit number: _____

Conversion station

Name of conversion station: _____

Address: _____

Postcode/city: _____

Telephone: _____

Name of fitter: _____

Date of conversion: _____

Fitted options

Kit/item number: _____

Kit/item number: _____

Kit/item number: _____

"Air suspension systems from VB-Airsuspension – for greater comfort and optimum handling in all situations."

Dear customer,

Congratulations! Your vehicle is equipped with the 'VB-SemiAir' auxiliary air suspension system from VB-Airsuspension B.V.

This user manual tells you everything you need to know about how to use the air suspension system and how it works. It also includes some important safety precautions and operating instructions. In view of the many possibilities and options, the design of your system may differ from that described here and certain options may not be included. To see which options apply to your vehicle, refer to the 'Basic information' on page 3.

We wish you a pleasant ride!

VB-Airsuspension B.V.

About this user manual

- Carefully read this user manual all the way through before using the vehicle. Otherwise, safe and error-free operation cannot be guaranteed.
- Observe all safety instructions and warnings in this user manual.
- This documentation is an integral part of the product and must be handed over to the purchaser if you sell the vehicle. Keep it with the vehicle documents.

Meaning of symbols

Strict observance of the warnings may prevent personal injury and/or material damage.

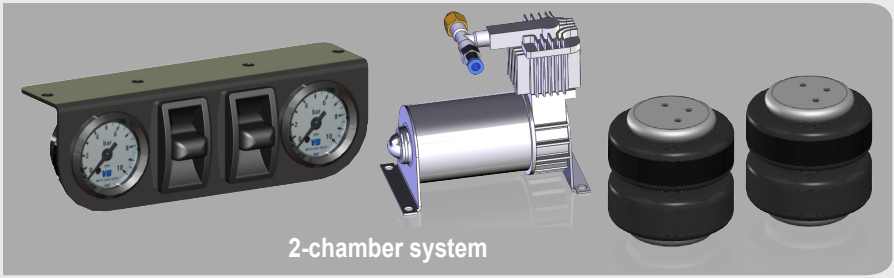
Special instructions to aid clarity and ease of use.

System overview

Your system is equipped with one of the auxiliary air suspension systems shown below.

Basic kit

Comfort kit



In view of the many possibilities and options, your version may differ from the example.

“Read and follow all the safety instructions. This is important for your own safety.”

Product description

The VB-SemiAir auxiliary air suspension system consists of two air springs, which supplement the existing suspension system. These air springs are connected to inflation valves or to a compressor kit with control panel, depending on the version. This allows you to adjust the semi air suspension.

Very simply, the system works like this: an air spring is mounted on both sides of the vehicle between the body and the axle. The ride height can be increased under load by supplying the air springs with compressed air.

Although different parts and special components (e.g. suspension components) have been developed for every make and type of vehicle, each semi air suspension kit contains the same basic components.

- Always make sure the vehicle is not overloaded. When using the air suspension system, overloading is not visible. If you are in any doubt, VB-Airsuspension advises you to weigh the axles before driving the vehicle.

Use

VB-Airsuspension systems improve the comfort and stability of the vehicle. It is also possible to control the ride height.

Improper use can have undesirable consequences. VB-Airsuspension is not liable for any resulting damage.

Safety instructions

Note:
Modifying the suspension system or ignoring VB-Airsuspension's conversion guidelines can seriously damage the air suspension. The vehicle may behave in unexpected ways, thereby causing dangerous situations which could result in accidents!

- The maximum air pressure in the air springs of a basic kit (when standing still or at speeds below 5 km/h) is 6 bar. At speeds of more than 5 km/h, the maximum air pressure is 3.5 bar. With a comfort kit, the maximum air pressure is always 3.5 bar.
- Make sure that the air springs always have at least the minimum air pressure of 0.5 bar. Without this air pressure, the auxiliary air suspension system may be damaged while driving.
- The air pressure of the left and right air springs must not differ by more than 0.5 bar.
- Only use the air suspension system to raise and lower the vehicle when it is stationary.
- Before raising or lowering the vehicle when stationary:
  - Secure vehicle against rolling away.
  - Make sure there is no possibility of injury or damage to people and property.
- Do not depress the brake pedal (if possible) while raising or lowering the vehicle. This is advisable to relieve the brake and avoid tension in the chassis.
- Always use a jack or hydraulic ramp to change a wheel or carry out servicing work.
- Do not use the air suspension system when raising one or more axles with a jack or hydraulic ramp.
- The air suspension must not be used to lift wheels from the ground during servicing work (to change a wheel for example).

"Contact your VB-Partner for more information about air suspension for your vehicle."

- Errors and/or faults in the air suspension system can have an undesirable effect on driving stability. This may cause the vehicle to sway and/or swing.
- Never pump too much air into the air springs. Driving with excessive air pressure in the air springs can damage the vehicle.

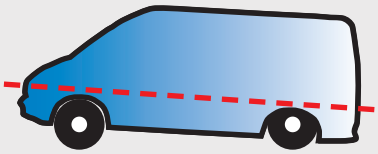
Risk of damage!
In case of damage or faults that cannot be rectified, contact an approved VB-Partner immediately. If this happens, drive extra carefully and at much lower speed.

Operation

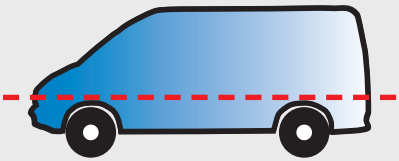
This section explains how to operate the auxiliary air suspension system. Depending on your version, the auxiliary air suspension system can be operated using inflation valves or using a compressor kit with control panel.

If the load makes the vehicle lopsided, you can make it roadworthy by pumping air into the system. Inflate the system in small steps and check from a distance to see whether the vehicle is level. Pump air alternately into the left and right air springs so that the vehicle is no longer lopsided. The air pressure of the left and right air springs must not differ by more than 0.5 bar.

The semi air suspension can be inflated to a maximum pressure of 3.5 bar while driving. Make sure the air pressure in the system is not lower than 0.5 bar. With a basic kit, the semi air suspension can be inflated to a maximum pressure of 6 bar for a maximum speed of 5 km/h. This can be useful for levelling the vehicle. With a comfort kit, the maximum air pressure is always 3.5 bar. The illustration shows when the vehicle is level.



WRONG
Pump more air into the system



RIGHT
Vehicle may be driven

Inflation valves

The basic kit comes with two inflation valves as standard. These allow you to pressurise the air suspension with an external air supply. The system consists of:

- An inflation valve for the left air spring with a green air tube attached
- An inflation valve for the right air spring with a black air tube attached

Inflation valves - increasing the ride height

1. Unscrew the protecting caps from the inflation valves.
2. Connect an external air supply (such as a tyre pump) to the inflation valves.
3. Inflate the air springs until the desired air pressure or ride height is reached.
4. Detach the external air supply from the inflation valves.
5. Screw the protecting caps onto the inflation valves.

Inflation valves - lowering the ride height

1. Unscrew the protecting caps from the inflation valves.
2. Depress the catch of the inflation valves.
3. Release air from the air springs until the desired air pressure or ride height is reached.

Note:

- Never inflate the system to a pressure of more than 3.5 bar if the vehicle is to be driven faster than 5 km/h. If the vehicle is still not level at this air pressure, reduce the load.
- If the vehicle is to be driven slower than 5 km/h, the air springs can be inflated to a maximum of 6 bar.
- Make sure that the air springs always have at least the minimum air pressure of 0.5 bar.
- The air pressure of the left and right air springs must not differ by more than 0.5 bar.
- Never pump too much air into the air springs. Driving with excessive air pressure in the air springs can damage the vehicle.

"After fitting the semi air suspension, have the headlamp adjustment checked."

1-chamber system (optional)

The 1-chamber system consists of a control panel with an inflation valve and a pressure gauge. The pressure gauge indicates the air pressure of the air springs.

1-chamber system - increasing the ride height

1. Unscrew the protecting cap from the inflation valve.
2. Connect an external air supply (such as a tyre pump) to the inflation valve.
3. Inflate the air springs until the desired air pressure or ride height is reached.
4. Detach the external air supply from the inflation valve.
5. Screw the protecting cap onto the inflation valve.

1-chamber system - lowering the ride height

1. Unscrew the protecting cap from the inflation valve.
2. Depress the catch of the inflation valve.
3. Release air from the air springs until the desired air pressure or ride height is reached.

Note:

- Only use the air suspension system to raise and lower the vehicle when it is stationary.
- Make sure that the air springs always have at least the minimum air pressure of 0.5 bar.
- Never pump too much air into the air springs. Driving with excessive air pressure in the air springs can damage the vehicle.

2-chamber system

The 2-chamber system consists of a control panel with two control switches and two pressure gauges. The pressure gauges indicate the air pressure of the air springs.

2-chamber system - increasing the ride height

1. Move the left control switch upwards to inflate the left air spring.
   Move the right control switch upwards to inflate the right air spring.
2. Release the left or right control switch when the desired air pressure or ride height is reached.

2-chamber system - lowering the ride height

1. Move the left and/or right control switch downwards to release air from the air springs.
2. Release the control switch when the desired air pressure or ride height is reached.

Note:

- Only use the air suspension system to raise and lower the vehicle when it is stationary.
- Make sure that the air springs always have at least the minimum air pressure of 0.5 bar.
- The air pressure of the left and right air springs must not differ by more than 0.5 bar.
- Never pump too much air into the air springs. Driving with excessive air pressure in the air springs can damage the vehicle.

"Maintaining your vehicle correctly reduces the likelihood of wear and faults."

Troubleshooting

Malfunctions can be diagnosed with the table below. If you cannot correct the fault, contact your nearest trained partner from VB-Airsuspension.

- In case of air loss, contact an authorised specialist workshop. With a 2-chamber system, reduce the air pressure in the system to 0.5 bar.
- Information about the spare parts you might need can be obtained from your VB-Partner. They will be pleased to help. Visit www.vbairsuspension.com for information about your VB-Partners.

Tracing faults

Fault	Possible cause	Remedy
Compressor not working	Fuse faulty	Replace the fuse
	Battery voltage too low	Charge the vehicle's battery
	Control switch faulty	Replace the switch
Compressor does not switch off	Electronic short-circuit	Remove the fuse and contact the conversion station
Air suspension does not raise, even with compressor running	Vehicle overloaded	Reduce load
	Leak in the system	Contact the conversion station to arrange a leak test
	Maximum air pressure reached	Release the switch
Vehicle is lopsided or low (after being parked for a long time)	Leak in the system	Contact the conversion station to arrange a leak test
	Load has shifted	Readjust the vehicle height

Maintenance

VB-Airsuspension systems are low maintenance. However, regular cleaning and visual inspections will help to reduce natural wear.

The following components must be checked for operation, wear, leaks and damage during servicing:

- Air springs
- Air tubes
- Compressor

The level of the vehicle may fall gradually if it is not used for long periods. To avoid permanent deformation and damage to the air springs:

- The vehicle should be supported with corner steadies (accessories).
- The air springs should be re-inflated with compressed air once a week.

Permitted cleaning agents:

- Soap solution
- Ethanol
- Methanol
- Isopropyl alcohol

Not permitted:

- Organic solvents
- Abrasives
- Steam and high-pressure cleaners
- Naked flames

"Keep a record of all service inspections. This gives an optimum overview of the vehicle."

Servicing

Service inspections can be entered below. This allows you to see when the system was inspected and whether repairs were carried out.

- Ask your conversion station to enter the information relating to service inspections.

Date: ____ - _____ - _____	Stamp:
Kilometre reading: _____ km	
Work carried out: _____ _____ _____	

Date: ____ - _____ - _____	Stamp:
Kilometre reading: _____ km	
Work carried out: _____ _____ _____	

Date: ____ - _____ - _____	Stamp:
Kilometre reading: _____ km	
Work carried out: _____ _____ _____	

Date: ____ - _____ - _____	Stamp:
Kilometre reading: _____ km	
Work carried out: _____ _____ _____	

Date: ____ - _____ - _____	Stamp:
Kilometre reading: _____ km	
Work carried out: _____ _____ _____	

Date: ____ - _____ - _____	Stamp:
Kilometre reading: _____ km	
Work carried out: _____ _____ _____	

"Contact your VB-Partner at any time if you have questions or if anything is unclear."

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VB-Airsuspension B.V. is constantly working to develop its products. We trust you will understand that, for this reason, the scope of delivery, the design, the functionality and the technology may vary. The content of this manual is a snapshot view of the situation as at the time it was written. VB-Airsuspension reserves the right to introduce changes at any time without warning.

Notes

"Air suspension systems from VB-Airsuspension – for greater comfort and optimum handling in all situations."

Notes

Notes

VB-Airsuspension is producing, as one of the few European manufacturers, a very broad range of different (air)-suspension systems. From reinforced coil springs, semi-air-suspension systems, up to complete full air-suspension systems, we provide solutions for customers with different vehicle types, like ambulances, minibuses, car transporters, motorhomes, etc. Now you can see why more and more commercial vehicle body manufacturers specify VB-Airsuspension on their vehicles.

Dealer:

VB airsuspension

www.vbairsuspension.com

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